

TRANSLATION

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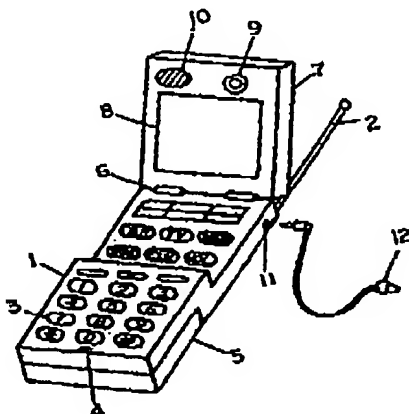
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(54) [Title of the Invention] PORTABLE WIRELESS TV TELEPHONE

(57) [Abstract]

[Object] To provide a portable wireless TV telephone capable of being used as a wireless TV telephone in such a manner that, when a flip section is opened, a user uses a speakerphone or an earphone while maintaining a constant distance relative to a monitor, a CCD camera and a speaker, and, when the flip section is closed, to dock the TV monitor to a device body, so that it can be used as a conventional portable phone in such a manner that the user puts an earpiece to his/her ear.

[Constitution] A portable wireless TV telephone comprises a device body 1 including an operation section and a microphone 4, and a flip section 7. The flip section 7 has a front surface designed to be docked to the device body 1 when the flip section 7 is closed, and provided with a monitor, a CCD camera 9 and a speaker 10. The flip section 7 also has a back surface designed to be flush with a surface of the operation section when the flip section 7 is closed, and provided with an earpiece.



**1. TITLE OF THE INVENTION**

**PORTABLE WIRELESS TV TELEPHONE**

**[Claims]**

**[Claim 1]** A portable wireless TV telephone comprising:

a device body including a key operation section and a microphone; and

a flip section coupled to said device body through a hinge, said flip section having a front surface designed to be docked to said device body when said flip section is closed, and provided with a monitor, a CCD camera and a speaker, and a back surface designed to be flush with a surface of said key operation section when said flip section is closed, and provided with an earpiece, whereby:

when said flip section is opened, said portable wireless TV telephone can be used as a wireless TV telephone in such a manner that a user uses a speakerphone or an earphone while maintaining a constant distance relative to said monitor, said CCD camera and said speaker and viewing said monitor, and

when said flip section is closed to dock said monitor to said device body, said portable wireless TV telephone can be used as a conventional portable phone in such a manner that the user puts said earpiece to his/her ear.

**[DETAILED DESCRIPTION OF THE INVENTION]**

**[0001]**

**[Field of Industrial Application]**

The present invention relates to a portable wireless phone having a TV telephone function, capable of transmitting/receiving a still or moving images, such as graphics or characters, and voice information.

[0002]

**[Prior Art]**

In recent years, in connection with the digitization and upgrading of services in wireless communications, portable wireless TV telephones, such as digital cellular phones and next-generation cordless phones (NIP), which are capable of transmitting/receiving a still or moving images such as graphics or characters, as well as voice information, have been increasingly commercialized.

[0003]

A conventional portable wireless TV telephone will be described below with reference to the drawings. FIG. 3 is an external view showing a conventional portable wireless TV telephone, wherein a flip section thereof is in an open position. In FIG. 3, the reference numeral 1 indicates a device body incorporating a wireless-communication/control circuit; 2 indicates an antenna for transmitting/receiving radio waves; 3 indicates a key operation section for entering telephone numbers; 4 indicates a microphone for entering voice; 5 indicates a battery section for supplying power; 6 indicates a rotatable hinge; 7 indicates a flip section coupled to the device body 1 through the hinge 6; 8 indicates a liquid-crystal monitor for displaying telephonic numbers entered through the key operation section 3 or character/graphic information transmitted from another party; 9 indicates a CCD camera for sending graphic information of a user on the device side to another party; 10 indicates a speaker serving as a speakerphone to output received voice; 11 indicates an earphone terminal; and 12 indicates an earphone adapted to be connected to the earphone terminal 11 when it is difficult to hear the received voice due to surrounding noise or when it is undesirable to allow the received voice to be heard by those around. FIG. 4 is a perspective view showing a conventional portable wireless TV telephone, wherein the flip section is in a closed position.

[0004]

An operation of the above conventional portable wireless TV telephone will be described below. When voice/graphic information is transmitted/received to/from a TV telephone terminal of another party, a user rotationally moves the flip section 7 coupled to the device body 1 through the hinge 6, to a position providing a good view of the liquid-crystal monitor 8 and the CCD camera 9, and immobilizes the flip section 7. Then, the user maintains a constant distance relative to the liquid-crystal monitor 8.

[0005]

Then, when the user turns on the power, power is supplied from the battery section equipped in the device body 1. The user enters a telephone number of another party through the key operation section 3 of the device body 1 while viewing the liquid-crystal monitor 8, to transmit a wireless signal from the antenna 2 through the control/wireless-communication circuit of the device body 1 so as to perform a call operation. After a communication circuit is connected wirelessly to another party's terminal, voice/graphic/character signals are transmitted and received between the terminals through the antenna 2 using a wireless signal as a medium. Voice information received from the other party's terminal is output in an audio manner from the speaker 10 operating as a speakerphone or the earphone 12 connected to the earphone terminal 11, graphic/character image information can be received in the form of an image to be output on the liquid-crystal monitor 8. Voice information to be transmitted to the other party's terminal is entered into the microphone 4 in the form of audio, and transmitted to the other party's terminal. Graphic information is entered into the CCD camera 9 in the form of an image, and transmitted to the other party's terminal.

[0006]

When the other party's terminal is a telephone having only a voice communication function without a TV telephone function, the liquid-crystal monitor 8 and the CCD camera

9 are turned off, and wireless communication for only voice information is performed in the same manner as that in the above operation.

[0007]

[Problem to be solved by the Invention]

The above conventional portable wireless TV telephone has no problem when the other party's terminal has a TV telephone function. However, when the other side's terminal has only voice communication function, the conventional portable wireless TV telephone presents the problem in that it is difficult to have a conversation using the speakerphone or earphone.

[0008]

The object of the present invention is to solve the above problem and to provide a portable wireless TV telephone capable of being used in the same manner as a conventional portable wireless phone in such a manner that, when a terminal of the other side has only a voice communication function, a user puts an earpiece section of a device body to his/her ear.

[0009]

[Means for Solving the Problem]

In order to achieve the above object, the present invention comprises a device body including a key operation section and a microphone, and a flip section coupled to the device body through a hinge. The flip section has a front surface designed to be docked to the device body when the flip section is closed, and is provided with a monitor, a CCD camera and a speaker, and a back surface designed to be flush with a surface of the key operation

section when the flip section is closed, and is provided with an earpiece. When the flip section is opened, the portable wireless TV telephone can be used as a wireless TV telephone in such a manner that a user uses a speakerphone or an earphone while maintaining a constant distance relative to the monitor, the CCD camera and the speaker and viewing the monitor. Further, when the flip section is closed to dock the monitor to the device body, the portable wireless TV telephone can be used as a conventional portable phone in such a manner that the user puts the earpiece to his/her ear.

[0010]

[Operation]

According to the above structure, when the other party's terminal has a TV telephone function, the present invention can be used as a wireless TV telephone in such a manner that the user opens the flip section, and then uses the speakerphone while maintaining a constant distance relative to the monitor, the CCD camera and the speaker, to communicate based on graphic/character information and voice information. In addition, when the other party's terminal has only a voice communication function, the present invention can be used as a portable phone in such a manner that the user closes the flip section, and then puts the earpiece section to his/her ear.

[0011]

[Embodiment]

With reference to the drawings, one embodiment of the present invention will now be described.

[0012]

In FIG. 1, the reference numeral 1 indicates a device body incorporating a wireless-communication/control circuit; 2 indicates an antenna for transmitting/receiving radio waves; 3 indicates a key operation section for entering telephone numbers; 4 indicates a microphone for entering voice; 5 indicates a battery section for supplying power; 6 indicates a rotatable hinge; 7 indicates a flip section coupled to the device body 1 through the hinge 6; 8 indicates a liquid-crystal monitor for displaying telephone numbers entered through the key operation section 3 or character/graphic information transmitted from another party; 9 indicates a CCD camera for sending graphic information of a user on the device side to another party; 10 indicates a speaker serving as a speakerphone to output received voice; 11 indicates an earphone terminal, and 12 indicates an earphone adapted to be connected to the earphone terminal 11 when it is difficult to hear the received voice due to surrounding noise or when it is undesirable to allow the received voice to be heard by those around. The above components are the same as those of the prior art example. FIG. 2 is an external view showing a portable wireless TV telephone, wherein the flip section is in a closed position. In this figure, the reference numeral 13 indicates an earpiece for outputting received sound in voice-only communication, and the reference numeral 14 indicates a segment display section for displaying character information, such as telephone numbers.

[0013]

An operation of the above portable wireless TV telephone according to this embodiment will be described below. When voice/graphic information is transmitted/received to/from a TV telephone terminal of another party, a user rotationally opens and immobilizes the flip section 7 coupled to the device body 1 through the hinge 6, to a position providing a good view of the liquid-crystal monitor 8 and the CCD camera 9. Then, the user maintains a constant distance relative to the liquid-crystal monitor 8. When the user turns on the power, power is supplied from the battery section 5 equipped in the device body 1. The user enters the telephone number of another party through the key operation section 3 of the device body 1 while making visual confirmation via the liquid-crystal monitor 8, to transmit a wireless



signal from the antenna 2 through the control/wireless-communication circuit of the device body 1 so as to perform a call operation.

[0014]

After a communication circuit is connected wirelessly to the other party's terminal, voice/graphic/character signals are transmitted and received between the terminals through the antenna 2 using a wireless signal as a medium. Voice information received from the other party's terminal is output in an audio manner from the speaker 10 operating as a speakerphone or the earphone 12 connected to the earphone terminal 11, and graphic/character image information can be received in the form of an image to be output on the liquid-crystal monitor 8. Voice information to be transmitted to the other party's terminal is entered into the microphone 4 in the form of audio. Graphic information is entered into the CCD camera 9 in the form of an image, and transmitted to the other party's terminal.

[0015]

When the other party's terminal is a telephone having only a voice communication function without a TV telephone function, or a user intends to transmit/receive only voice information, after closing the flip section 7 as shown in FIG. 2, and turning off the liquid-crystal monitor 8 and the CCD camera 9, the user turns on power to supply power from the battery section 5 equipped in the device body 1. The user enters the telephone number of the other party's terminal through the key operation section 3 of the device body 1 while making visual confirmation via the segment display section 14, to transmit a wireless signal from the antenna 2 through the control/wireless-communication circuit of the device body 1 so as to perform a call operation.

[0016]

After a communication circuit is connected to the other party's terminal, a voice signal is transmitted and received between the terminals using a wireless signal as a medium. Voice information from the other party's terminal can be received and output in an audio manner from the earpiece 13 or the earphone 12 connected to the earphone terminal 11. Voice information to be transmitted to the other party's terminal is entered into the microphone 4 in the form of audio, and transmitted to the other party's terminal. Thus, during the wireless communication based on only voice, instead of conversation using the speakerphone while maintaining a constant distance relative thereto, the flip section 7 is closed, thereby making it possible to have a conversation in such a manner that the user puts the earpiece 13 to his/her ear as in a conventional portable wireless phone.

[0017]

[Effect of the Invention]

As described above, the present invention can provide a portable wireless TV telephone capable of being used as a wireless TV telephone in such a manner that, when the other side's terminal has a TV telephone function, a user opens the flip section, and uses the speakerphone while maintaining a constant distance relative to the monitor, the CCD camera and the speaker, making it possible to perform communication based on graphic/character information and voice information, and, when the other party's terminal has only a voice communication function, it can be used as a conventional portable phone in such a manner that the user closes the flip section, and puts the earpiece to his/her ear.

[BRIEF DESCRIPTION OF THE DRAWINGS]

FIG. 1 is an external view showing a portable wireless TV telephone according to one embodiment of the present invention, wherein a flip section thereof is in an open position.

FIG. 2 is an external view showing the portable wireless TV telephone according to one embodiment of the present invention, wherein the flip section is in a closed position.

FIG. 3 is an external view showing a conventional portable wireless TV telephone, wherein a flip section thereof is in an open position.

FIG. 4 is a perspective view showing the conventional portable wireless TV telephone, wherein the flip section is in a closed position.

[EXPLANATION OF THE REFERENCE NUMERALS]

- 1 Device body
- 2 Antenna
- 3 Key operation section
- 4 Microphone
- 5 Battery section
- 6 Hinge
- 7 Flip section
- 8 Liquid-crystal monitor
- 9 CCD camera
- 10 Speaker
- 11 Earphone terminal
- 12 Earphone

FIG. 1

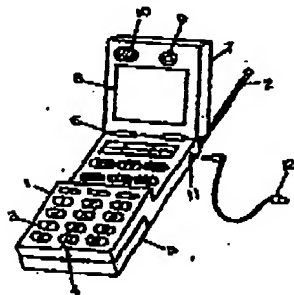


FIG. 2

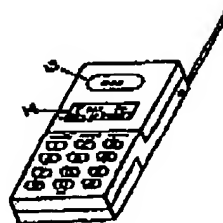


FIG. 3

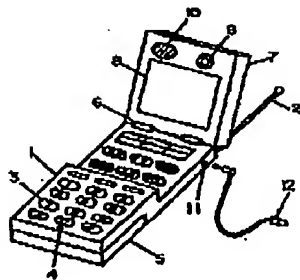
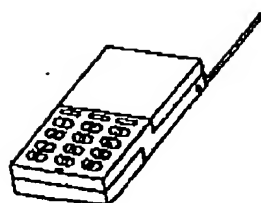


FIG. 4



CERTIFICATION OF THE TRANSLATION

I, John F. Bukacek, declare that:

1. I am a certified translator who is knowledgeable and fluent in both the Japanese and English languages.
2. The attached is a true, accurate, and complete translation of Japanese Patent Kokai Publication No. Heisei 06-292195 from the Japanese language into the English language.

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Sworn and subscribed before me  
This 17<sup>th</sup> day November 2005.

*Rolando Santiago*

